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Workplace training for small and medium-sized enterprises

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# **Resource efficiency and Culture – workplace training for small and medium-sized enterprises**

## **1 Abstract**

Although there are already some qualification offers available for enterprises to support resource efficiency innovations, the high potentials that can be identified especially for small and medium sized enterprises (SMEs) have not been activated until now. As successful change lies in the hands of humans, the main aim of vocational education has to be the promotion of organisational and cultural changes in the enterprises. As there is already a small but increasing number of enterprises that perform very well in resource efficiency innovations one question arises: What are typical characteristics of those enterprises? Leaning on a good-practice approach, the project "ResourceCulture" is going to prove or falsify the hypothesis that enterprises being successful with resource efficiency innovations have a specific culture of trust, which substantially contributes to innovation processes, or even initially enables them. Detailed empirical field research will light up which correlations between resource efficiency, innovation and cultures of trust can be found and will offer important aspects for the improvement of management instruments and qualification concepts for workplace training. The project seizes qualification needs that were likewise mentioned by enterprises and consultants, regarding the implementation of resource efficiency. This article – based on first empirical field research results – derives preliminary indications for the design of the qualification module for the target groups resource efficiency consultants and managers. On this basis and in order to implement "ResourceCulture" conceptual and methodological starting points for workplace training are outlined.

## **2 Introduction**

The project ResourceCulture (period 09/2009 to 04/2013) is a joint research project of the Wuppertal Institute and the artec – Research Centre for Sustainability (University of Bremen). It is part of the funding programme "Working, Learning, Developing Competence - Being innovative in a Changing Working Environment" of the German Federal Ministry of Education and Research (BMBF).

The central research hypothesis of the project is the following: businesses that enact innovations in resource efficiency display specific work and trust cultures that may be part of value oriented and value appreciative business structures. As a necessary precondition for innovative ability of businesses, such culture has positive effects on the implementation of strategies for resource and material efficiency as well as on the positioning in the growing market of resource efficiency technologies. The aim of the project is to investigate possible links between resource efficiency, innovation and cultures of trust by doing detailed empirical field research. Target of the project is to establish a significant added value for resources management by the development and piloting of instruments, methods and a qualification module (summed up in a toolbox). The qualification module in particular aims at the promotion of qualifications to enable people in charge for the implementation of changes that move towards a sustainable culture of trust.

## **3 Research methodology**

The methodology used for the empirical field research allows making organisational conditions accessible as well as experiences of the organisational actors:

1. In depth analysis of current research on trust culture (see Gundert et al. 2011), resource efficiency (see Dreuw et al. 2011) as well as innovation. The results are summed up in "Resource Paper 1" (see Bliesner et al. 2010).
2. Survey for enterprises<sup>1</sup> dealing with resource efficiency, done in close cooperation with the Efficiency Agency North-Rhine Westphalia (EFA) and the German Material Efficiency Agency (demea)<sup>2</sup>. 188 CEOs (19,9%) and 124 consultants (29,3%) returned their completed questionnaires which entered the analysis.
3. Field studies with 17 enterprises<sup>3</sup> which had already made use of consultancy in resource and material efficiency. In each enterprise, the following persons were interviewed: the Chief Executive Officer (CEO), a responsible person for the topic resource efficiency, a representative of the staff and the consultant of the enterprise in terms of resource efficiency (external perception).

Within these three steps the subject of qualification was continuously surveyed as a cross-cutting issue which was examined and addressed in the context of adult learning and correlated training formats.

#### **4 Qualification within the meaning of ResourceCulture – indications from the survey phase**

The following indications can be identified at the current state of the evaluation (selection).

##### **Corporate/ learning/ error/ leadership culture and cultures of trust**

- Key factors of a culture of trust are particularly reciprocity, interaction, and the non-theming of trust as a promoting condition for a culture of trust. Thereby, interpersonal trust which is reinforced in interactions is of special relevance. At the same time it is a prerequisite for the formation of a system of trust (see Giddens 1995, Luhmann 1989, Endress 2002). In this context, employee participation and fairness are essential requirements for a culture of trust. For the topic resource efficiency this applies especially to the aspect of employee participation in decision making processes. On the one hand, very high importance is attached to this aspect. However, at the same time it has to be appraised that corresponding structures and processes are not existent in practice (see Schmitt et al. 2011).
- The self-evaluation of the interviewed CEOs concerning their management style were addressed which allows references to the organisational learning structure and the tolerance for mistakes in companies (see Rohn et al. 2010 a). In order to enable individual and organisational learning error and leadership cultures play an important role (see Stadelmann 2004; Anlauff 2007; Frommann 2000; Raich 2009). 49% of the questioned CEOs find it "rather important" to hold employees accountable for mistakes whereas 34% find this "rather unimportant". The evidence regarding the prevailing learning and innovation cultures in companies refers to extensive optimisation potentials

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<sup>1</sup> Most of the enterprises which successfully completed the survey (40%) were located in the sector of machine engineering and metalworking industry, some were part of the food industry or chemical and plastics industry (see Schmitt et al. 2011, 27). Nearly the half of the enterprises (43%) had a workforce up to 49 people, just 4% pass the mark of 500 people (see Schmitt et al. 2011, 30).

<sup>2</sup> The survey mainly addressed four fields: handling of resources, corporate culture and cooperation, structurewise data of the enterprise and personal data (see Schmidt et al. 2011, 25).

<sup>3</sup> Some of the involved enterprises already participated in the survey.

in view of structural and systematic anchoring of innovation processes and their connectedness with participatory and confidence promoting aspects - in general and for innovation processes towards resource efficiency, in particular (see Schmitt et al. 2011).

- The freedom for creativity and feedback is rated “very important” (23%) and “rather important” (55%) by the CEOs. Interestingly, the effort in actively creating a creative work environment as part of a systemic implementation of innovation processes is not considered highly important. Only 16% of the CEOs evaluate the importance of a systematic implementation of a creative work environment as “very high”, 43% as “rather high” and more than a third (39%) as “rather low”. In comparison: Asking the consultants for the provision of a creative work environment for employees, from the consultant’s point of view only 3% of the enterprises rate as “very important” but more than 50% as “rather unimportant” (see Rohn et al. 2010 a; see Schmitt et al. 2011).

### **Human resource and competence development**

- The essential internal hindering conditions in regard to innovation for SMEs lie among others in the characteristics of change processes, organisational structures and communication as well as lacking skills and competencies (Kristof 2010; Stuhldreier 2002).
- Concerning the issue of resource efficiency a lack of knowledge is in many SMEs existent. This can also be traced back to the fact that explicit qualification offers - in the realm of vocational training schools, universities and the free vocational advanced training landscape - are rare for the relevant target groups (see BMU 2012; Lemken 2009; KoReBB 2011). Within the range of university degree programmes the subject is embedded in the field of resource management. By now, resource management has come to the fore in a significant number of degree programmes and generally has a technical or business / economics background (see de Haan 2007). The topic of resource efficiency is much less prevalent in occupations that require formal training. Up to now, no explicit occupations that require formal training have been established regarding the issue of resource efficiency. Nevertheless, in ordinances on apprenticeships an increase in contents relevant to resource efficiency can be documented (see BIBB 2009; Rohn et al. 2010 b).
- If employees are to be involved in change processes “participation competence” - which is the prerequisite for successful participation in change processes - is required (see Anlauff et al. 2007.144). For people in charge of the implementation of employee participation in change processes means learning to give action and decision latitude. In addition, they have to learn to communicate and implement clear and defined goals regarding the scope of participation (see Anlauff et al. 2007.144; Görlach et al. 2009.22).
- Change processes in businesses, including innovations in resource efficiency, are often triggered by key personnel, so called change agents (Fichter et al. 2007.11; Klemisch, Rohn 2002.21-23). These actors, their competencies and motivations seem even more important since lacking human resources, missing skills and factual knowledge can also be seen as strong hindrance factors in innovation for resource efficiency (see EFA/WI 2001.36; Kristof 2010; Schmitt et al. 2011).

### **Consultancy**

- From the consultants’ perspective, the competencies that characterise the implementation of consultancy in resource efficiency, as well as the additional qualification needs that are derived from consultancy in resource efficiency, are widely spread. Thereby business competencies prepend all other competencies (see Schmitt et

al. 2011). For accompanying consultancy qualification needs in the field of soft skills are also emphasised. Qualification in the realm of moderation, coaching, employee participation, cooperation / networking, work and corporate culture is signalled by a large majority of consultants (see Schmitt et al. 2011).

- Content related, consultants see a very high demand for the issue of resource efficiency itself (approx. 54%). More than one third of consultants identify the thematic fields of moderation techniques (approx. 38%), coaching (approx. 37%), process and production technology (approx. 40%) and funding opportunities for SMEs (38%) as further areas of need with very high qualification needs (see Schmitt et al. 2011).
- Instruments for promoting an innovation-friendly corporate culture (see Anlauff 2007) and for "system compatible cultural development" (see INEUVO 2007) - which are also implementable by SMEs - can be identified. However, these instruments usually require external assistance (consultants). This can possibly lead to external dependency (Klemisch, Rohn 2002.11f). These instruments suggest different methods for employee participation. Also some versions of "classical" instruments in the field of resource efficiency, such as the "PIUS-Check+TEAM" by the Efficiency Agency North-Rhine Westphalia (see EFA 2012), provide forms of employee participation already.

## **5 Conceptual and methodological considerations for a qualification module "ResourceCulture"**

Based on the research and the first survey results the following conceptual considerations can be outlined regarding the development of a qualification module (see Bliesner/Rohn 2013):

### **Theoretical foundation**

In the ResourceCulture project companies are primarily considered from a systems theory perspective. In this project the term "trust" is addressed on the one hand as interpersonal trust and on the other hand as system trust (see Gundert et al. 2011). The company's social order in which work cultures take effect is understood as a supraindividual system of stable expectations including perceptions, concepts, rules and routines (see Kotthoff 2009, 429). Trust relationships with and between social units are thereby perceived as a functional structure element (systemic perspective also see Luhmann 1989).

Cultures of trust (or organisational characteristics in this regard) - in the capacity of corporate goal - can be deliberately altered by interventions in sense of qualification. The to be developed qualification concept shall address the individual (human resource / competence development) as well as the collective level (organisational development / learning). The aim is a double-loop learning (change learning, see Brentel 2003; Kristof 2010), which finds permanent access into the corporate culture. For learning that incorporates the social and systemic perspective, concepts from (vocational) education for sustainable development (see e.g. de Haan 2008; BMBF 2003; Welfens et al. 2008) are suitable. At this point, also references regarding relevant competencies can be found.

For qualification in the field of occupational / vocational training an adequate didactical model should be chosen. A constructivist perspective on learning of adults appears to be promising, provided that the cultural and systemic perspective is integrated as well (de Haan 2000; Backes-Haase 1998). Here, the corresponding methods also have to be chosen. Action-oriented methods (e.g. role play, map exercise, action sociometry, company theatre, see Ameln/Kramer 2007) are of special relevance, although they might have to be adjusted if necessary for use in the field of occupational / vocational continuing education and for the emotionally occupied theme of trust (and the aspects that are derived from

operationalisation). In this context, ways and means must be found, besides technical contents such as resource efficiency, to adequately teach an issue like trust.

### **Content-related and structural characteristics**

The to be developed qualification module will be modular in itself, build from different building blocks with various teaching and learning materials, methods and media so that depending on target group needs time and content tailored qualification formats (e.g. half-day to multi-day formats as external qualification or company specific in-house) are possible. A good practice collection and the creation of an instrument suitcase "ResourceCulture" will be added to the qualification module.

The target groups of the qualification module are, in addition to consultants, especially the management level of SMEs such as owners or managers, leading employees and people in charge within the field of resource efficiency. The qualification module will address contentwise methods and instruments promoting cultures of trust and organisational development in relation with innovations and resource efficiency as well as their drivers and barriers.

The qualification module aims at the following: Supporting the target groups - during the implementation of different measures for resource efficiency (e.g. management, process and product optimisation, procurement) - in observe elements of cultures of trusts within the company. In addition, by the use of participative methods concrete design approaches shall be developed and put into practice. The theming of trust can take place indirectly via the aspects error, leading and learning culture, which are also preconditions and promoter of cultures of trust (see Gundert et al. 2011). The topics feedback and quality control should be addressed not only with respect to the corporate culture in companies, but also in relation to the consultancy process. The issue of trust and the theming of corporate culture in general, can (at least in part) be linked to concrete measures at the operational fields of action in the realm of resource efficiency.

In terms of the to be promoted qualifications an output-based description – in the sense of an action and usage orientation - of the learning outcomes should be made. Their acquisition should be made possible in the respective module parts. In the forefront and in conjunction with the participating target groups "target profiles" should be developed in order to concretise the competence field focus of the qualification. Besides technical knowledge about resource efficiency this will also include competencies of interdisciplinary / social nature.

To allow companies to permanently benefit from qualification and for structural and cultural integration of the qualification contents, formats such as appointing and qualifying a "Change-Agent" or "ResourceCulture-Agent" are target-aimed. The establishment of committees, which consist of people from different hierarchical levels and functional units, thereby connecting the know-how of management and employees can be regarded as a promising format (see Schmitt et al. 2011). In addition, the qualification module will be integrated into the qualification offer of educational providers (e.g. efficiency agencies).

## **6 Conclusion**

"ResourceCulture" comprises all phenomena that constitute and influence the company's culture of trust in association with a resource efficiency orientation. Strategies are meant to target both, the support of specific cultures of trust and the resource efficiency. There is still a need for persuading people of the usefulness of innovation in resource efficiency for companies and especially for SMEs. Besides that, strategies for the sustainable implementation into the strategy and management of the respective organisation - and

thereby into the specific corporate culture - are missing. This is the point where the analysis of trust and culture applies. The systematic linkage between trust and culture makes them either a promoting or a constraining factor for implementation. The training module will have the task to find this important access to the culture of trust. In this context, the qualification offer has to go beyond the previously known with respect to both, content and methodology.

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